

The Body, Mathematics, Nudity and Body Image

When I was 16 I snuck out into the back garden when I was sure there was no-one around and stood there for a few minutes, naked. It was a thrill. To be outdoors and naked.

A few weeks later I got a train out into the depths of the countryside and found a forest where there were no people. I was able to stand there naked for ten minutes or so in the middle of a forest. In the middle of a forest, naked. Again. A thrill. A test of courage.

Our clothes mean so much to us.

Our clothes are more than a simple function of protection from the elements.

Our clothes express our personality if we can afford clothes which we actually like. When we're poor our clothes only express our basic need of some covering. But still we try to express some sort of idea or feeling through even the least interesting garments.

When I was young black clothing was serious, like a funeral or the suit of some serious person who worked in a bank or for the civil service. Black leotards or black trousers and black polo neck jumpers meant serious artists, like beatniks and painters and dancers. Years later the goths came and ruined the seriousness of it with all their vampire silliness. Of course they were tatterdemalion and standing at the gates of heaven and hell, so I am not the judge of them. They must use their own judgement.

The only time I was ever naked in public was at the Glastonbury Festival when I was working in the information centre on the Green field in 1987.

When I reached the age of 40, in 1993, I still had the same waist measurement that I had had when I was 16. I was still wearing trousers with a 28 inch waistband. This is, I suppose, because I didn't eat meat, fish or dairy and I had very little interest in alcohol. Also I tended to be very physically active. I've never been a car driver.

After the age of 40 my body began to put on fat quite quickly.

By the time I reached 50 I was so fat that I could hardly recognise myself in the mirror.

Since then it's been a struggle back and forth between putting on some fat and dieting down to a bit less fat, over and over, a repeating cycle of slightly fatter and slightly thinner.

Getting older is an unlucky dip. We wake up each day and wonder which bit of our body is going to go wrong today. Will it be our feet, our back, our hearing, our eyesight, our knees, our hips, our digestion, our memory or what?

One day I might be limping on my right leg and the next I might be limping on my left leg. It depends which one has gone wrong today.

The human body begins as mathematics.

For the majority of humans the sperm containing 23 chromosomes meets the egg containing the other 23 chromosomes and together they form the tiny bit of human material which will grow into a fetus. So most people have 46 chromosomes, although some people have 48, so we could say that nature allows variation.

Variation is important. It's the basis of all evolution. Numerologists please take note and understand. The mathematics of nature needs variation. Trying to hang exact meanings onto numbers which appear in natural systems is unrealistic.

The mathematics of the cells is repeated again and again in the growth of the body. The cell division process of one, two, four, eight, sixteen, thirty-two, sixty-four etc. results in a body structure with bilateral symmetry and a recurrence of "thirty-two-ish" patterns. We have parts of the body with thirty-two or thirty-three or thirty-one numbers of joints or of bones. Sort of thirty-two-ish approximations. The dogma of Kabbalistic numerology subverted by the processes of the real world.

The lungs form as two matching organs with three chambers in each but then the third chamber in the left lung separates and becomes the heart. The bilateral symmetry is skewed to suit the needs of life functions.

Many a good mind has been misled by a fantasy of numerology.

All life forms on Earth develop their form from the patterns of cell division interacting with exterior forces. One set of mathematics being skewed by another set of mathematics. One set of forces pushing against another set of forces.

Often a high school science teacher may tell their students that "nothing can be created or destroyed. Things only change their form". This is a reference to the principle of conservation of matter and energy. Matter and energy are the same thing in different forms and neither of them is created or destroyed. The amount of matter and energy in the universe remains the same but changes its form.

These statements from physics are correct in their way. They state a very important principle in physics. However, they tend to minimise the importance of Form.

Form is something.

Form is not nothing.

To say "Nothing can be created or destroyed, it only changes its form" is slightly wrong. The FORM is created or destroyed.

We live in a universe made of matter, energy, space, time and form. Of these five things form, or we could call it shape, is the one which can be created and destroyed. The universe has no conservation of shape.

I take a ball of clay. I shape it into a bust of Julius Caesar. The ball is destroyed. Caesar is created.

So the subject of high School Physics is interested in matter and energy but disregards “form” or “shape” as unimportant. The matter/energy stuff “only” changes its form. In the Fine Art Department, on the other hand, we are interested in the creation and destruction of form. Form matters to us. Form has weight. Form has energy.

When we look at the human body we see the outer form but we also can see the function of the body in motion.

I’m very lucky in that I not only went to drama school and studied Rudolf Laban movement but also I went to university art school and studied fine art.

There is a design principle which states that “Form follows function”. That principle doesn’t quite work for Mother Nature though because natural forms of plants, animals and humans are arrived at without any particular intention regarding function. Lifeforms evolve because of random variations in the DNA/RNA copying process and so we can’t expect our earlobes to have any particular function.

If architectural design copied nature it would be randomly adding on bits of buildings for no particular reason and the result would be something in between the style of a medieval village and an experimental artwork. On the other hand, following the random mutation method of nature would also lead to the same result. That is to say that natural selection would cause useless bits to be discarded in favour of bits which aid our survival. In any case we are obviously different to nature in that we have a mind and nature, as far as anyone knows, doesn’t.

So we consider the possibility of human body cyber augmentation and the opportunity to apply design principles to our own physical lives.

We have risen above nature but we are still dependent upon nature.

I know that there are people who would be absolutely outraged by the statement that we have risen above nature but the fact is that we have a society driven by ideas as much as physical circumstances. That’s the difference.

Nature has no ideas. Nature has only the mathematics of happenstance. We have come into existence as a bit of serendipity and we now have the unexpected ability to consider our own situation and to plan accordingly.

So we build a world of ideas. A world of feelings and expression. A world of language and meaning structures. This world is different to nature. In nature a book would be merely some

wood pulp to be eaten by bugs. In our human world of ideas a book can be a whole universe of happiness and wonderment.

Many of our ideas are to do with what things look like.

The outer form of a body or an object doesn't immediately tell us the inner structure of the thing.

When I was in my 20s I was temporarily obsessed with an image in my mind of what a transparent glass tetrahedron would look like if you rotated it through five different points in space and filmed it with an afterimage effect of trailing images. It seemed to me that the edges of the tetrahedron would make the shape of a pentagram inscribed within a pentagon. It seemed to be really significant but I couldn't quite figure out why it would be. The rotating tetrahedron was the physical structure while the pentagram was "only" a two dimensional illusion caused by circumstance. Like the moon and sun looking the same size because of a coincidence of their respective distances and sizes. Four hundred and four hundred.

Like shadows on a wall or reflections in a mirror. The two dimensionality of the not real. And years later I realised that the "significant" thing I'd been puzzling over was about the difference between the two dimensional image and the three dimensional geometric form being rotated through space over a period of time. Two dimensions, three dimensions, four dimensions. I tried to make a piece of work from this idea when I was an art student in the 1990s but was prevented from doing the proper thing that I wanted by tutor/technician interference. Very frustrating. The tutors never understood any of things I was talking about and trying to do.

The pentagram was interesting because it was the most useful geometric shape for containing the outline of the stretched out human body. Head, arms, legs extended like the petals of a flower. The apex making the shape of a pointy witch's hat above the human head. The tetrahedron was interesting because it is the simplest three-dimensional geometric shape which can be constructed using straight lines.

If you made a tetrahedron shaped die the numbers on the four sides would add up to ten.

The next object up would be a cube shaped die on which the numbers add up to twenty-one. The next after that would be a dodecahedron with twelve pentagon shaped sides and the numbers would add up to seventy-eight. I had noticed that these numbers also appear in the tarot, there being seventy-eight cards in the whole pack and twenty-one cards in the Major Arcana. My mind wanders off into obscure puzzlings about Buckminster Fuller geodesic domes and The Pantheon in Rome..... I drift through a landscape of strange odd thoughts, typical of the arty poet type of mind. My mind is notable because it has no table! What is this table of which you speak? Is it not a fable from the crash of Babel? Does it have legs which are stable and may be labeled as able?

Back to the body again from the strange world of the mind.

Rudolf Laban analysed the movement of the body and categorised it according to three dualities:

Forceful or Light,

Quick or Sustained,
Direct or Indirect.

So a kick would be a movement of the leg which is forceful, quick and direct while a stroking movement would be sustained and indirect with varying degrees of force or lightness. Each of the three dualities is a sliding scale so, just as forcefulness can be increased or decreased, so can quickness or directness.

The increase of directness can be characterised as increasing focus onto a narrower and narrower range, closing in on a target point.

Movements are seldom completely direct. A boxer's punch, for instance, has a varying amount of swing.

Our bodies move in relation to the space around them, in relation to other people's bodies and in relation to objects like chairs and walls.

The visual effect of a dance movement is arrived at through structure and function creating outer form. The physical body and its energy are not created or destroyed but they change their form as they move.

Writing notation for physical movement of the body is far more complex than writing music notation because each part of the body has to have its own notation and then all of the interactions between the body parts and the walls, objects and other dancers will continually change the meaning of the movement.

We are trying to express ideas of meaning in a whole universe of possible complex meanings.

This may sound like a problem but it is actually a good thing. Life would be very boring if all feelings and meanings and movements could easily be codified down into a simple list of items.

I'm very much opposed to reductionism of meaning. The only way that you can reduce all stories down to seven basic archetypes would be by removing most of the details from the story and it is the details which make the story interesting. Removing those details is an act of violence which would only make sense to a bureaucrat. Why not go all the way and remove all of the remaining details? Then all stories would be reduced down to one story which would look like this:

Once upon a time some sort of thing happened. The End.

So we form languages by throwing body shapes and colours of clothing and sounds and rhythms. All of which helps to make the human world of meanings and ideas which we have built on top of the natural world of random physical happenings.

For the love of art.

In the words of Stanley Unwin: "Deep Joy. Oh yes!"